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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/565,696

Applicant(s)

HAYASHI ET AL.

Examiner

RICHARD A. HUHNS

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-08)
- Paper No(s)/Mail Date 5 Jan 2009
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Any rejections and/or objections, made in the previous office action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 5 January 2009. In particular, claims 1, 8, and 10 have been amended to contain hydroxylic monomers, and claims 15-17 are new. Support for the hydroxylic monomers at page 17 is acknowledged. Support for the new claims at pages 14-15 is acknowledged. The new and newly amended claims were not present at the time of the preceding action. For this reason, the present action is properly made final.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

2. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

3. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 11/628172.

5. US '172 discloses resins for resists according to the instant claims. US '172 fails to claim the structures of the instant claims. However, US '172 claims the use of acrylates generally (see last line of claim 10, for example), and the specification supports the use of acrylates according to the instant formulas (see paragraphs 107-115). Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970). Therefore, it would have been obvious to one of ordinary skill in the art to use acrylates according to the instant claims as are disclosed by US '172.

6. Claims 1-17 are directed to an invention not patentably distinct from claims 10-16 of commonly assigned copending Application No. 11/628172. See paragraph 5 above for an explanation.

7. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned copending Application No. 11/628172, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

9. A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent No. 2003-223001. This document was published on 8 August 2003.

The abstract of this document was supplied by Applicant. The computer-generated English translation is referenced herein.

12. As to claims 1 and 8: JP '001 discloses resins for resists which comprise the following structural units:

- a. acrylates according to instant formula (a1-1) and (a1-1-1) in which the acid dissociable dissolution inhibiting group may be monocyclic (see paragraphs 13-15 and 31).
- b. acrylates according to instant formula (a2) and (a2-1) which comprise the lactone group butyrolactone (see the formulas in paragraph 102).
- c. acrylates according to instant formula (a3) which comprises a hydroxyl group-containing aliphatic hydrocarbon (see the formulas in paragraph 62).

13. JP '001 teaches that the monomers of the instant formulas may be acrylates and methacrylates (see paragraphs 14, 62, and 102), corresponding to the instant formulas in which R=hydrogen or methyl.

14. As to claims 2 and 9: JP '001 further discloses acrylates according to instant formula (a1-2) and (a1-2-1) which comprise a monocyclic aliphatic hydrocarbon group with a tertiary carbon at the point of attachment to the ester (see paragraphs 13-14 and formula pl in paragraph 15).

15. As to claims 3 and 10: JP '001 discloses hydroxyl group-containing adamantanes according to the instant formula (see the formulas in paragraph 62).

16. As to claims 4 and 11: JP '001 discloses acrylates which comprise polycyclic aliphatic hydrocarbon groups which are different from those applied above to claims 1 and 8 (see the formulas in paragraph 43).

17. As to claim 5 and 12: JP '001 discloses that the resin compositions include acid generators, and that the resins disclosed therein exhibit increased alkali solubility upon reaction with the acid (see the last 8 lines of paragraph 3).

18. As to claim 6 and 13: JP '001 discloses that the resin composition may include nitrogen containing compounds such as amines (see paragraph 176).

19. As to claim 7 and 14: JP '001 discloses the method of forming a resist pattern recited in the instant claims, including forming a resist film from the resins disclosed therein, selective laser exposure, and alkali development (see paragraph 199 for an example).

20. As to claim 15: JP '001 discloses monomers for resist resin compositions which are acrylates according to instant formula (a1-2) as recited in instant claim 2 and according to instant formula (a1-2-1) as recited in instant claim 9, in which the group R^{12} is an ethyl group. (See the first line of paragraph 16 which recites ethyl, and paragraphs 13-15 as applied above to instant claims 2 and 9).

21. As to claims 16 and 17: JP '001 discloses the compound of formula (VII) in the instant claims (see paragraph 102, structures (IV-1) and (IV-3)).

22. In view of this discussion, it is evident that the present claims stand properly anticipated by Japanese Patent No. 2003-223001.

23. Claims 1, 3-8, 10-14, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication No. 2002/0068238.
24. US '238 discloses resins for resists which comprise the following structural units:
25. As to claims 1 and 8: US '238 discloses resins for resists which comprise the following structural units:
- d. acrylates according to instant formula (a1-1) and (a1-1-1) in which the acid dissociable dissolution inhibiting group may be monocyclic (see cyclohexyl (meth)acrylate at paragraph 28)
 - e. acrylates according to instant formula (a2) and (a2-1) which comprise the lactone group butyrolactone (see lactones at paragraph 22)
 - f. acrylates according to instant formula (a3) which comprises a hydroxyl group-containing aliphatic hydrocarbon (see an hydroxy-adamantane at paragraph 24).
26. US '238 teaches that the monomers of the instant formulas may be acrylates and methacrylates (see, for example, paragraph 28), corresponding to the instant formulas in which R=hydrogen or methyl.
27. As to claims 3 and 10: US '238 discloses hydroxyl group-containing adamantanes according to the instant formula (see the formulas in paragraph 24).
28. As to claims 4 and 11: US '238 discloses acrylates which comprise polycyclic aliphatic hydrocarbon groups which are different from those applied above to claims 1 and 8 (see the formulas in paragraph 28).

29. As to claim 5 and 12: US '238 discloses that the resin compositions include acid generators, and that the resins disclosed therein exhibit increased alkali solubility upon reaction with the acid (see paragraph 21).
30. As to claim 6 and 13: US '238 discloses that the resin composition may include nitrogen containing compounds such as amines (see paragraph 36).
31. As to claim 7 and 14: US '238 discloses the method of forming a resist pattern recited in the instant claims, including forming a resist film from the resins disclosed therein, selective laser exposure, and alkali development (see paragraph 50 for an example).
32. As to claims 16 and 17: US '238 discloses the compound of formula (VII) in the instant claims (see paragraph 53).
33. In view of this discussion, it is evident that the present claims stand properly anticipated by US '238.

Response to Arguments

34. Applicant's arguments filed 19 December 2008, with respect to hydroxyl group-containing monomers have been fully considered and are persuasive. Applicant correctly points out that US '678 excludes hydroxyl-group containing monomers, and the instant claims as amended require hydroxyl-group containing monomers. Applicant's argument that US '678 fails to obviate the instant claims as amended is

therefore found persuasive. The rejection of claims 1-14 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,165,678 has been withdrawn.

35. However, upon further consideration, a new ground(s) of rejection has been made above in view of a newly found prior art reference, Japanese Patent No. 2003-223001.

Conclusion

36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

37. This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an

appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

38. If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee.

39. If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

40. A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD A. HUHN whose telephone number is (571)

270-7345. The examiner can normally be reached on Monday to Friday, 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RICHARD A HUHN/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796